

3/9/2000  
~~STN~~ Search  
STN/APS

08989261

\$%^STN;HighlightOn= \*\*\*;HighlightOff=\*\*\* ;  
=> d hist

(FILE 'HOME' ENTERED AT 14:21:34 ON 29 FEB 2000)

FILE 'USPATFULL' ENTERED AT 14:21:40 ON 29 FEB 2000

L1            0 S DIFFERENT (2A) ALGORITHM# (2A) ENCRYPTION (3A) BLOCK  
#  
L2            0 S DIFFERENT (2A) ALGORITHM# (2A) ENCRYPTION (3A) SEGME  
NT#  
L3            79 S DIFFERENT (2A) ALGORITHM# (2A) ENCRYPTION  
L4            12 S L3 (P) (SEGMENT# OR BLOCK#)  
L5            2 S ENCRYPTION OBJECT  
L6            0 S 5577125.PN.  
L7            0 S 5577125/PN  
L8            0 S 5577125  
L9            1 S L5 AND (DOUBLE CLICKING)  
L10          0 S L9 AND OOP  
L11          0 S L9 AND (OBJECT ORIENTED)  
L12          3681 S OBJECT ORIENTED  
L13          15 S L12 AND ENCRYPTION (2A) OBJECT

:1

L19 ANSWER 1 OF 1 USPATFULL

AB       An access control processor for a conditional access system in  
which  
          \*\*\*encrypted\*\*\* information    \*\*\*segments\*\*\* provided by a  
plurality  
          of information service providers are encrypted for transmission  
in  
          accordance with different conditional access processes respecti  
vely  
         utilizing    \*\*\*different\*\*\*    \*\*\*algorithms\*\*\* for encrypti  
ng the  
          information segments. The processor includes a decryptor in an  
information receiver by decrypting encrypted information segmet  
s  
         received by the information receiver by processing the received  
          \*\*\*encrypted\*\*\* information    \*\*\*segments\*\*\* with a session  
key used  
         for encrypting the information segments in accordance with an a  
lgorithm  
         utilized in one of said. . . . access processes; and a conditi  
onal  
         access controller in the information receiver for selectively e

nabling

the decryptor to decrypt received information \*\*\*segments\*\*\*

\*\*\*encrypted\*\*\* in accordance with any of said different conditional

access processes by providing to the decryptor cryptographic information

for defining the. . . utilized in said one of said different conditional access processes for use by the decryptor to decrypt the

received information \*\*\*segment\*\*\* \*\*\*encrypted\*\*\* in accordance

with said algorithm. Algorithm-defining cryptographic information is

downloaded from an information stream received by the information

receiver. Transmission. . .

SUMM In the prior art, \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\*

respectively provided by a plurality of different conditional access

information service providers are respectively encrypted for transmission in accordance with different conditional access processes,

which may respectively utilize \*\*\*different\*\*\* \*\*\*algorit

hms\*\*\* for encrypting the information segments; and the differently \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* are respectively

decrypted by differently configured information receivers respectively

containing access control processors adapted for enabling decryption of

only \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with one of the different conditional

access processes. An encryption algorithm is a process by which a given.

SUMM : : . Klein S. Gilhousen, Jerrold A. Heller, Michael V. Hard

ing and

Robert D. Blakeney. In such conditional access system, an information

\*\*\*segment\*\*\* is \*\*\*encrypted\*\*\* for transmission by scram

bling

the information segment with a keystream that is produced by processing

a secure session key in. . . algorithm. In an information re

ceiver of such a conditional access system, the encrypted information signal is decrypted by descrambling the \*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* with a keystream that is produced by processing the secure session key in accordance with the predetermined encryption algorithm. The. . . is processed to produce the keystream that is used to scramble an information segment for a given transmission of the \*\*\*encrypted\*\*\* information \*\*\*segment\*\*\*. Typically the session key is processed with another key and/or a data signal to produce the keystream. In the two. . .

SUMM The prior art has suggested a conditional access system that would enable \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* respectively \*\*\*encrypted\*\*\* for transmission in accordance with different conditional access processes to be descrambled through use of a standard information receiver having. . . the different conditional access information service providers for enabling a common descrambler in the information receiver to descramble received information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with any of the different conditional access processes. In such a system the use of a common descrambler to decrypt \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* provided by any of a plurality of different information service providers that respectively \*\*\*encrypt\*\*\* information \*\*\*segments\*\*\* for transmission in accordance with any of a plurality of different conditional access processes respectively utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\* for encrypting the information segments would make it necessary that each of the detachable conditional access modules respectively provided by. . .

SUMM The present invention provides an access control processor for a conditional access system in which \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* provided by a plurality of information service providers are encrypted for transmission in accordance with different conditional access processes respectively utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\* for encrypting the information segments, the processor comprising a decryptor in an information receiver for decrypting \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* received by the information receiver by processing the received \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* with a session key used for encrypting the information segments in accordance with an algorithm utilized in one of said. . . . access processes; and a conditional access controller in the information receiver for selectively enabling the decryptor to decrypt received information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with any of said different conditional access processes by providing to the decryptor cryptographic information for defining the. . . utilized in said one of said different conditional access processes for use by the decryptor to decrypt the received information \*\*\*segment\*\*\* \*\*\*encrypted\*\*\* in accordance with said algorithm.

The cryptographic information for defining the encryption algorithm may define various bit selection and/or processing. . . .

SUMM . . . be contained in a detachable conditional access module that would be interfaced with the information receiver for enabling decryption of \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* provided by such service provider, thereby reducing the cost of the detachable conditional access modules, which are replaced from time. . .

SUMM . . . present invention also provides a conditional access s

system including the above-described access control processor in combination with encryption means for \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\* for transmission in accordance with different conditional access processes respectively utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\* for encrypting the information segments.

SUMM In another aspect, the present invention provides an access control processor for a conditional access system in which an \*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* provided by an information service provider is encrypted for transmission in accordance with a conditional access process utilizing an algorithm for encrypting the information segment, the processor comprising a decryptor in an information receiver for decrypting \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* received by the information receiver by processing the received \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* with a session key used for encrypting the information segments in accordance with an algorithm utilized in said conditional access process; and a conditional access controller in the information receiver for enabling the decryptor to decrypt received information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with said conditional access process by providing to the decryptor cryptographic information for defining the algorithm utilized in said conditional access process for use by the decryptor to decrypt the received information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with said algorithm, wherein the conditional access controller includes means for detecting within an information stream received by the information receiver cryptographic information for defining the algorithm used for \*\*\*encrypting\*\*\* information

\*\*\*segments\*\*\* in accordance with said conditional access process; and

means for downloading the detected cryptographic information from said

information stream.

SUMM In a further aspect, the present invention provides an access control

processor for a conditional access system in which an \*\*\*encrypted\*\*\*

information \*\*\*segment\*\*\* provided by an information service

provider is encrypted for transmission in accordance with a given

conditional access process, the processor comprising a decryptor in an

information receiver for decrypting \*\*\*encrypted\*\*\* information

\*\*\*segments\*\*\* received by the information receiver; and a conditional

access controller in the information receiver for enabling the decryptor

to decrypt received information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\*

in accordance with the given conditional access process; wherein the

conditional access controller includes means for requesting transmission

to the. . .

DETD . . . information service provider A for transmission in accordance

with a first conditional access processes utilizing a first algorithm A

for \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\* 14a; and

second information server 10b encrypts clear information segments 14b

provided by a second information service provider B. . .

DETD . . . a session key K in accordance with the first algorithm A

utilized in the first conditional access process to provide \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23. The session key K

is included in cryptographic information 24 that is processed by the

entitlement message generator 20 with entitlement information 25 to

provide entitlement messages 26. The encoder 22 combines the \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 and entitle

ment

messages 26 to provide a combined signal 27 for transmission. Examples

of entitlement information are described in. . .

DETD The demultiplexer 33 demultiplexes a received combined signal 3  
8

containing \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* a  
nd

entitlement messages and provides the received \*\*\*encrypted\*\*  
\*

information \*\*\*segments\*\*\* 23 to the decryptor 31 and the r  
eceived

entitlement messages 26 to the conditional access controller 32

DETD . . . processes the entitlement messages 26 to determine whe  
ther the

decryptor 31 in the information receiver 12 is authorized to de  
crypt

\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 identified  
by the

service request signal 40. Upon determining that the decryptor  
31 and

thereby the information receiver 12. . . 32 provides appropr  
iate

cryptographic information 42 to the decryptor 31 to thereby ena  
ble the

decryptor 31 to decrypt the received \*\*\*encrypted\*\*\* inform  
ation

\*\*\*segments\*\*\* 23. The cryptographic information 42 includes  
the

session key K and cryptographic data for defining the algorithm  
A or B

utilized in the conditional access process used to produce the  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 identified  
by the

service request signal 40.

DETD The decryptor 31 then decrypts the received \*\*\*encrypted\*\*\*  
information \*\*\*segments\*\*\* 23 by processing the received  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 with the se  
ssion key

K used for encrypting the information segments in accordance wi  
th the

algorithm A or B utilized in the conditional access process use  
d to

produce the \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\*  
23, to

thereby reproduce the clear information segments 14, which are  
provided

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to the information processor 35.

DETD The decryptor 51 receives a combined signal 58 containing \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* and entitlement messages.

DETD . . . decryptor 51 is enabled for decryption, the combined signal 59

provided from the decryptor 51 to the demultiplexer 53 includes \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\*.

DETD . . . processes the entitlement messages 60 to determine whether the

decryptor 51 in the information receiver 49 is authorized to decrypt

the \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* identified by

51 and service request signal 62. Upon determining that the decryptor

thereby the information receiver 49 is. . . 52 provides appropriate

cryptographic information 64 to the decryptor 51 to thereby enable the

decryptor 51 to decrypt the received \*\*\*encrypted\*\*\* information

\*\*\*segments\*\*\* included in the received combined signal 58. The

cryptographic information 64 includes the session key K and cryptographic data for defining the algorithm A or B utilized in the

conditional access process used to produce the \*\*\*encrypted\*\*\*

\* information \*\*\*segments\*\*\* identified by the service request signal

62. Since the combined signals 27a provided by the information server

10a of information service provider A may incorporate the \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* into the combined signal 27a in a different format than the format used for such purpose

by the information server. . . 51 by the conditional access controller 52 further includes format data that enables the decryptor 51 to decrypt only the \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\*

included in the combined signal 58.

DETD . . . decryption, the combined signal 59 provided from the decryptor

51 to the demultiplexer 53 includes clear information segments

rather

than \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* .  
DETD The decryptor 51 decrypts the received \*\*\*encrypted\*\*\* information  
\*\*\*segments\*\*\* in the combined signal 58 by processing the received  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* with the session key K  
used for encrypting the information segments in accordance with  
the algorithm A or B utilized in the conditional access process used  
to produce the \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* ,  
to thereby reproduce the clear information segments 14, which are provided

by the multiplexer 53 to the information processor 55.  
DETD . . . 82 stored in the memory 74 to determine whether the decryptor

31 in the information receiver is authorized to decrypt  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* identified by the

service request signal 40. Upon determining that the decryptor 31 and

thereby the information receiver is so. . . .  
DETD . . . to thereby provide to the decryptor 31 the cryptographic

information 42 that enables the decryptor 31 to decrypt the received  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 identified

by the service request signal 40. As indicated above, the cryptographic

information 42 includes the session key K. . . . and cryptographic  
information for defining the algorithm A or B utilized in the conditional access process used to produce the \*\*\*encrypted\*\*\*

\* information \*\*\*segments\*\*\* identified by the service request signal  
40.

DETD . . . identified in the service request signal 40. In one embodiment,

the memory 74 stores the cryptographic information for defining the  
\*\*\*different\*\*\* \*\*\*algorithms\*\*\* A and B respectively used in the

different conditional access processes. In another embodiment t

he cryptographic information for defining each. . . . 75 respectively provided by the different conditional access information service providers and respectively storing the cryptographic information for defining the \*\*\*different\*\*\* \*\*\*algorithms\*\*\* A, B utilized for decrypting the received \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 in accordance with the different conditional access processes A and B.

DETD . . . of the service providers; and selects for decryption in accordance with a predetermined priority based upon such status determinations the \*\*\*encrypted\*\*\* information \*\*\*segment \*\*\* provided by one of the service providers. Examples of different statuses include, in order of priority: "blacked-out", "locked-out", "authorized", "available. . . .

DETD . . . in the information receiver to determine that the decryptor 31 in the information receiver is authorized to decrypt the selected \*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* . If the cryptographic information generator 72 is of the type described in the aforementioned U.S. Pat. No. 4,712,238, at least. . . .

DETD . . . algorithm that is used in the conditional access process utilized by the information server 10a, 10b that encrypts the selected \*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* and cryptographic data for use in generating a session key for use by the decryptor 32 for decrypting information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with the given conditional access process, including data for defining an algorithm for generating the session key and. . . .

DETD . . . receiver 12, 49 includes all of the possible status messages 94

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in addition to the entitlement messages 26 and the \*\*\*encrypt ed\*\*\*

information \*\*\*segments\*\*\* 23. In this embodiment, the conditional

access controller 32, 52 includes a control processor 95, an authorization processor 96, a. . .

DETD . . . to thereby provide to the decryptor 31 the cryptographic

information 42 that enables the decryptor 31 to decrypt the received

\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* 23 identified by the

service request signal 40.

DETD . . . by the information provider. Hence each conditional access

service provider can customize its own conditional access algorithms,

including the information \*\*\*segment\*\*\* \*\*\*encryption\*\*\*

algorithm. Accordingly the required integrated circuit sets in a present

day proprietary network interface module are replaced by the access. .

.

CLM What is claimed is:

. . . by a plurality of information service providers are encrypted for

transmission in accordance with different conditional access processes

respectively utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\*

for encrypting the information segments, the processor comprising a decryptor in an information receiver for decrypting \*\*\*encrypted\*\*\*

information \*\*\*segments\*\*\* received by the information receiver by

processing the received \*\*\*encrypted\*\*\* information \*\*\*se gments\*\*\*

with a session key used for encrypting the information segments

in accordance with an algorithm utilized in one of said. . . ac cess

processes; and a conditional access controller in the information receiver for selectively enabling the decryptor to decrypt received

information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordanc e with

any of said different conditional access processes by providing to the

decryptor cryptographic information for defining the. . . utilized in

said one of said different conditional access processes for use by the

decryptor to decrypt the received information \*\*\*segment\*\*\* \*\*\*encrypted\*\*\* in accordance with said algorithm.

. . . means for detecting within an information stream received by the

information receiver cryptographic information for defining the algorithm used for \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\*

in accordance with said one of said different conditional access

processes; and means for downloading the detected cryptographic information from. . .

. . . claim 1, wherein the conditional access controller includes a memory

in the information receiver storing cryptographic information for

defining said \*\*\*different\*\*\* \*\*\*algorithms\*\*\* respectively

utilized in said different conditional access processes.

. . . service providers; and means for selecting for decryption in accordance with a predetermined priority based upon said status determinations the \*\*\*encrypted\*\*\* information \*\*\*segment

\*\*\*

provided by one of said service providers.

. . . algorithm provided by the conditional access controller to the

decryptor is provided in accordance with said selection of the selected

\*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* provided by said one service provider.

. . . combination with a demultiplexer in the information receiver, wherein

the demultiplexer is adapted for demultiplexing a received combined

signal containing \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* and

entitlement messages; wherein the decryptor is coupled to the demultiplexer for receiving the demultiplexed \*\*\*encrypted\*\*\*

the information \*\*\*segments\*\*\* for said decryption, and wherein  
or conditional access controller is coupled to the demultiplexer f  
. . . receiving the demultiplexed entitlement messages. . .  
the . . . according to claim 1 in combination with a demultiplexer in  
information receiver, wherein the decryptor is adapted for decr  
ypting \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* in a received  
combined signal containing \*\*\*encrypted\*\*\* information \*\*\*segments  
\*\*\* and entitlement messages, wherein the demultiplexer is coupled to t  
he decryptor for demultiplexing the combined signal following said  
decryption of the \*\*\*encrypted\*\*\* information \*\*\*segments  
\*\*\* by the decryptor; and wherein the conditional access controller is  
coupled to the demultiplexer for receiving the demultiplexed entitlemen  
t messages. . .  
. . . encrypted information is provided by a plurality of informat  
ion service providers in accordance with different conditional acce  
ss processes respectively utilizing \*\*\*different\*\*\* \*\*\*algor  
ithms\*\*\* for encrypting the information, comprising encryption means for  
ion in \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\* for transmiss  
ion in accordance with different conditional access processes respecti  
vely utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\* for encrypti  
ng the information segments; a decryptor in an information receiver fo  
r decrypting \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* r  
eceived by the information receiver by processing the received \*\*\*enc  
rypted\*\*\* information \*\*\*segments\*\*\* with a session key used for encr  
ypting the information segments in accordance with an algorithm utiliz  
ed in one of said. . . access processes; and a conditional access cont

roller in  
the information receiver for selectively enabling the decryptor  
to  
decrypt received information \*\*\*segments\*\*\* \*\*\*encrypted\*  
\*\* in  
accordance with any of said different conditional access proce-  
ses by  
providing to the decryptor cryptographic information for defin-  
ing the.

. . . utilized in said one of said different conditional access  
processes for use by the decryptor to decrypt the received info-  
rmation  
\*\*\*segment\*\*\* \*\*\*encrypted\*\*\* in accordance with said alg-  
orithm.

. . . other cryptographic information includes data for use in gen-  
erating a

session key for use by the decryptor for decrypting information  
\*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with the alg-  
orithm

utilized in said one of said different conditional access proce-  
ses; and

the conditional access controller. . .

. . . medium for use in an access control processor included in an  
information receiver of a conditional access system in which  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* provided by a  
plurality

of information service providers are encrypted for transmission  
in  
accordance with different conditional access processes respecti-  
vely  
utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\* for encrypti-  
ng the

information segments, and including a decryptor for decrypting  
\*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* received by th-  
e  
information receiver by processing the received \*\*\*encrypted\*  
\*\*

information \*\*\*segments\*\*\* with a session key used for encr-  
ypting

the information segments in accordance with an algorithm utiliz-  
ed in one

of said. . . medium is configured so as the cause the condi-  
tional  
access controller to selectively enable the decryptor to decryp-  
t

received information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in  
accordance with any of said different conditional access proces-

ses, by

providing to the decryptor cryptographic information for defining the.

. . . utilized in said one of said different conditional access processes for use by the decryptor to decrypt the received information

\*\*\*segment\*\*\*      \*\*\*encrypted\*\*\*      in accordance with said algorithm.

. . . controller to detect within an information stream received by the

information receiver cryptographic information for defining the algorithm used for \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\*

in accordance with said one of said different conditional access

processes and to download the detected cryptographic information from

said. . .

. . . encrypted information is provided by a plurality of information

service providers in accordance with different conditional access

processes respectively utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\*

for encrypting the information, comprising the steps of: (a) \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\* for transmission in

accordance with different conditional access processes respectively

utilizing \*\*\*different\*\*\* \*\*\*algorithms\*\*\* for encrypting the

information segments; (b) using a decryptor in an information receiver

to decrypt \*\*\*encrypted\*\*\* information \*\*\*segments\*\*\* received

by the information receiver by processing the received \*\*\*encrypted\*\*\*

information \*\*\*segments\*\*\* with a session key used for encrypting

the information segments in accordance with an algorithm utilized in one

of said conditional access processes; and (c) in the information

receiver, selectively enabling the decryptor to decrypt received

information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with

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any of said different conditional access processes by providing to the

decryptor cryptographic information for defining the. . . utilized in

said one of said different conditional access processes for use by the

decryptor to decrypt the received information \*\*\*segment\*\*\* \*\*\*encrypted\*\*\* in accordance with said algorithm.

. . . of: (d) detecting within an information stream received by the

information receiver cryptographic information for defining the algorithm used for \*\*\*encrypting\*\*\* information \*\*\*segments\*\*\*

in accordance with said one of said different conditional access

processes; and (e) downloading the detected cryptographic information from said. . .

. . . step of: (d) providing the cryptographic information from a memory in

the information receiver storing cryptographic information for defining

said \*\*\*different\*\*\* \*\*\*algorithms\*\*\* respectively utilized in

said different conditional access processes.

. . . the service providers, and (e) selecting for decryption in accordance

with a predetermined priority based upon said status determinations the

\*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* provided by one of said service providers.

. . . of: (f) providing the cryptographic information for defining the

algorithm to the decryptor in accordance with said selection of the

\*\*\*encrypted\*\*\* information \*\*\*segment\*\*\* provided by said one service provider.

. . . the cryptographic information includes data for use in generating a

session key for use by the decryptor for decrypting information \*\*\*segments\*\*\* \*\*\*encrypted\*\*\* in accordance with said one

e

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conditional access process.

NCL NCLM: 705/054.000  
NCLS: \*\*\*380/047.000\*\*\* ; \*\*\*380/228.000\*\*\*  
:d pn

L19 ANSWER 1 OF 1 USPATFULL  
PI US 5796829 19980818  
WO 9608912 19960321

:end

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(FILE 'HOME' ENTERED AT 14:21:34 ON 29 FEB 2000)

FILE 'USPATFULL' ENTERED AT 14:21:40 ON 29 FEB 2000

L1 0 S DIFFERENT (2A) ALGORITHM# (2A) ENCRYPTION (3A) BLOCK#  
L2 0 S DIFFERENT (2A) ALGORITHM# (2A) ENCRYPTION (3A) SEGMENT#  
L3 79 S DIFFERENT (2A) ALGORITHM# (2A) ENCRYPTION  
L4 12 S L3 (P) (SEGMENT# OR BLOCK#)  
L5 2 S ENCRYPTION OBJECT  
L6 0 S 5577125.PN.  
L7 0 S 5577125/PN  
L8 0 S 5577125  
L9 1 S L5 AND (DOUBLE CLICKING)  
L10 0 S L9 AND OOP  
L11 0 S L9 AND (OBJECT ORIENTED)  
L12 3681 S OBJECT ORIENTED  
L13 15 S L12 AND ENCRYPTION (2A) OBJECT  
L14 84 S ENCRYPT? (2A) SEGMENT?  
L15 61 S L14 AND (713/NCL OR 380/NCL)  
L16 63 S ENCRYPT? (1A) SEGMENT?  
L17 44 S L16 AND (713/NCL OR 380/NCL)  
L18 1087 S DIFFERENT ALGORITHM#  
L19 1 S L17 AND L18

=> d hist

(FILE 'HOME' ENTERED AT 16:46:38 ON 01 MAR 2000)

FILE 'USPATFULL' ENTERED AT 16:46:46 ON 01 MAR 2000

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L1            72 S ONE TIME PAD  
L2            1 S L1 (P) (CHANGING OR DYNAMIC)

=> d kwic

L2 ANSWER 1 OF 1 USPATFULL

SUMM Other modern encryption systems have attempted to simulate the key generation process of a \*\*\*one\*\*\*       \*\*\*time\*\*\*       \*\*\*pad\*\*\*  
\* by using pseudo-random generators which creates a long series of keys having the statistical property of randomness. Patents on such keys and using them to decrypt the transmitted ciphertext. Thus the system can change keys as often as desired, even \*\*\*changing\*  
\*\* the key for every block to be encrypted. The use of pseudo-random generators has greatly enhanced the strength of many systems, but it does not perfectly create a \*\*\*one\*\*\*       \*\*\*time\*\*\*       \*\*\*pad\*\*\* .

=> d pn

L2 ANSWER 1 OF 1 USPATFULL  
PI        US 5003596 19910326

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L5 ANSWER 1 OF 3 USPATFULL

CLM What is claimed is:  
. . . method according to claim 17, wherein the step of generating two or more round keys further includes the steps of: \*\*\*dividing\*\*\*  
the original \*\*\*key\*\*\* into a first key and a second key of equal length; processing the first key using a \*\*\*hash\*\*\* function to obtain a first set of intermediate keys; and processing the second key

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using a \*\*\*hash\*\*\* function to obtain a second set of intermediate keys.

37. The system according to claim 36, wherein the key processor further

comprises: a \*\*\*key\*\*\* separator for \*\*\*dividing\*\*\* the original

\*\*\*key\*\*\* into a first key and a second key of equal length; a first

\*\*\*hashing\*\*\* processor for processing the first key using a \*\*\*hash\*\*\* function to obtain a first set of two or more intermediate

keys; and a second \*\*\*hashing\*\*\* processor for processing the second

key using a \*\*\*hash\*\*\* function to obtain a second set of two or

more intermediate keys.

NCL NCLM: \*\*\*380/029.000\*\*\*

NCLS: \*\*\*380/037.000\*\*\*

:2

L5 ANSWER 2 OF 3 USPATFULL

CLM What is claimed is:

. . . monotonic, single valued function having a value for its independent

\* variable which is a product of an integer times a \*\*\*hashed\*\*  
value

characteristic of said selected publisher; said key value capable of

being read by a book validation program to enable. . . system, said

key value by determining an inverse value for a customized inverse

monotonic, single valued function expression using said \*\*\*key\*\*\*  
value, \*\*\*dividing\*\*\* said inverse value by said \*\*\*hashed\*\*\*

value to obtain a quotient value and determining if said quotient value  
is an integer.

. . . monotonic, single valued function having a value for its independent

\* variable which is a product of an integer times a \*\*\*hashed\*\*  
value

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characteristic of said selected publisher; said key value capable of

being read by a book validation means to enable. . . validating said

key value by determining an inverse value for a customized inverse

monotonic, single valued function expression using said \*\*\*key\*\*\*

value, \*\*\*dividing\*\*\* said inverse value by said \*\*\*hashed\*\*\*

value to obtain a quotient value and determining if said quotient value

is an integer.

NCL NCLM: 705/051.000  
NCLS: \*\*\*380/028.000\*\*\* ; \*\*\*380/277.000\*\*\* ; 704/001.00  
0;  
          707/500.000; \*\*\*713/168.000\*\*\*  
:3

L5 ANSWER 3 OF 3 USPATFULL

DETD . . . is to use a means similar to Cipher Block Chaining (CBC) mode,

as defined for the DEA. In this case, \*\*\*key\*\*\* record is \*\*\*divided\*\*\* into blocks whose length is such that each block can be

encrypted with the asymmetric key algorithm. After each step.

step 522 control vector and key record are concatenated to form an

intermediate value called HA-IN. At step 523, a \*\*\*hash\*\*\* value

\*\*\*HASH2\*\*\* is calculated on HA-IN using \*\*\*hash\*\*\* algorithm ha2.

For example, \*\*\*hash\*\*\* algorithm ha2 may be the MDC-2 algorithm of

FIG. 5 and \*\*\*HASH2\*\*\* a 128-bit MDC value. The value \*\*\*HASH2\*\*\*

is for practical purposes defined to be the key authenticator record

(KAR). However, the KAR may contain additional data besides \*\*\*HASH2\*\*\*. At step 524, KAR is decrypted with private master key PRO

to produce dPRO(KAR). In public key cryptography, the ciphertext.

NCL NCLM: \*\*\*380/277.000\*\*\*  
NCLS: \*\*\*380/030.000\*\*\* ; \*\*\*380/280.000\*\*\*